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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,004	01/30/2002	R. Christopher deCharms	27969-702	7144

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EXAMINER

SHAW, SHAWNA JEANNINE

ART UNIT PAPER NUMBER

3737

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/066,004	<b>Applicant(s)</b> DECHARMS, R. CHRISTOPHER	
	<b>Examiner</b> Shawna J. Shaw	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-23,25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-23,25 and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 4-14, 16-23, 25 and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 15, 23 and 30 are objected to because of the following informalities:  
Claim 15 fails to positively set forth an additional method step. In claims 23 and 30 line 2, "a computer executable instruction" should be --computer executable instructions--.  
In claim 30 line 3, "instruction comprises" should be --instructions comprise--.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-23, 25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voyvodic "Real-Time fMRI Paradigm Control" of record in view of Kaufman/Arakawa et al. (5,184,074), hereinafter 'Kaufman et al.'

Regarding claims 1, 4-17, 19-23, 25 and 27-30, Voyvodic et al. disclose all of the claimed subject matter, including obtaining high-resolution fMRI images (inherently including one of the claimed regions of interest, see fig. 3-6) - except for employing a

computer/logic to communicate information to the subject in real-time. Kaufman et al. generally demonstrates that it is well established to use a computer/logic (24, 26) to visually communicate feedback to a patient (implicitly involving instructions to move or remain still - during patient motion studies, col. 3 lines 3-16; or to obtain high resolution images, col. 1 lines 15-20) via a display (30, located in the MR gantry room) - in real-time (i.e., continuously, see col. 3 line 63 – col. 4 line 5 and col. 6 lines 7-16). It would have been obvious at the time the invention was made to a person of ordinary skill in the art to use the computer to communicate information directly to the patient via a visual display located in the gantry room in the invention of Voyvodic et al. as taught by Kaufman et al. to provide continuous feedback regarding the image data so as to allow the patient to make quicker adjustments, thereby effectively reducing scan time and improving resolution, and as is well known in the art.

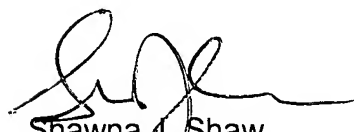
Further regarding claim 18, although Kaufman et al. does not expressly disclose displaying text or icons, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to display the feedback in the form of text or icons, because applicant has not disclosed that such display of information provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the visual display of image data as taught by Kaufman et al.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawna J. Shaw whose telephone number is (571) 272-4743. The examiner can normally be reached on 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shawna J. Shaw  
Primary Examiner  
Art Unit: 3737  
03/15/2005